

# Claims

- [c1] An x-ray assembly comprising:  
a target shaft;  
an x-ray target element mounted to said target shaft;  
a circumferential feature formed in said x-ray target element; and  
at least one weight element adapted to be securable in a plurality of positions within said circumferential feature such that said x-ray target element can be balanced around said target shaft.
- [c2] An x-ray assembly as described in claim 1, wherein said circumferential feature comprises:  
a circumferential groove formed in said x-ray target element.
- [c3] An x-ray assembly as described in claim 1, wherein said circumferential feature is positioned around a perimeter surface of said x-ray target element.
- [c4] An x-ray assembly as described in claim 1, wherein said circumferential feature is positioned around an x-ray facing surface of said x-ray target element.

- [c5] An x-ray assembly as described in claim 1, wherein said x-ray target element comprises:  
a central neck portion extending from an x-ray facing surface along an inner x-ray target diameter, said circumferential feature formed onto said central neck portion.
- [c6] An x-ray assembly as described in claim 1, wherein said circumferential feature comprises:  
an entry port formed in said circumferential feature, said entry port allowing said at least one weight element to be inserted into said circumferential feature.
- [c7] An x-ray assembly as described in claim 1, wherein said circumferential feature comprises:  
a flange element positioned around a perimeter surface of said x-ray target element.
- [c8] An x-ray assembly as described in claim 7, further comprising:  
a plurality of mounting bores positioned along said flange element, said securable within any of said plurality of mounting bores.
- [c9] An x-ray assembly as described in claim 1, wherein said circumferential feature comprises:  
a circumferential securing elbow slot, said at least one

weight element including a securing elbow adapted to fit within said circumferential securing elbow slot and secure said at least one weight element within said circumferential feature.

- [c10] An x-ray assembly as described in claim 9, wherein said circumferential securing elbow slot comprises a t-shaped slot.
- [c11] An x-ray assembly as described in claim 9, wherein said circumferential securing elbow slot comprises a triangular slot.
- [c12] An x-ray assembly as described in claim 2, wherein said at least one weight element comprises:  
an expandable weight assembly including an expansion bore and an expansion screw, said expansion screw expanding said expandable weight assembly to secure said at least one weight element within said circumferential groove.
- [c13] An x-ray target assembly comprising:  
an x-ray target element;  
a feature formed on said x-ray target element, said feature adapted to receive a weight element; and  
at least one weight element adapted to be securable in a plurality of positions on said feature such that said x-ray

target element can be balanced around said target shaft.

[c14] An x-ray target assembly as described in claim 13,  
wherein said circumferential feature comprises:  
a circumferential groove formed in said x-ray target element.

[c15] An x-ray target assembly as described in claim 13,  
wherein said x-ray target element comprises:  
a central neck portion extending from an x-ray facing  
surface along an inner x-ray target diameter, said feature  
formed onto said central neck portion.

[c16] An x-ray target assembly as described in claim 13,  
wherein said feature comprises:  
a securing elbow slot, said at least one weight element  
including a securing elbow adapted to fit within said securing  
elbow slot and secure said at least one weight element  
within said feature.

[c17] An x-ray target assembly as described in claim 13,  
wherein said feature comprises:  
a flange element positioned on said x-ray target element.

[c18] A method of balancing an x-ray target assembly, comprising:  
placing a weight element within a circumferential feature

formed onto an x-ray target element;  
positioning said weight element in a position along said circumferential feature that balances said x-ray target element; and  
securing said weight element to said circumferential feature.

[c19] A method of balancing an x-ray target assembly as described in claim 18, further comprising:  
forming a circumferential groove in said x-ray target element, said circumferential groove creating said circumferential feature.

[c20] A method of balancing an x-ray target assembly as described in claim 18, further comprising:  
forming a circumferential flange in said x-ray target element, said circumferential flange creating said circumferential feature.